

## INFORMATION DISCLOSURE STATEMENT

BY APPLICANT

Docket: EWG-082-

Ser: 08/746,613

Applicant: Geoffrey B. Rhoads

Filed: 11/12/96

Group: 2721

## U.S. PATENT DOCUMENTS

Init.*		Number	Date	Name	Class	Sub	Filed
EB		3,493,674	2/3/70	Houghton	1	1	
EB		3,585,290	6/15/71	Sanford	1	1	
EB		3,809,806	5/7/74	Walker et al.	1	1	
EB		3,971,917	7/27/76	Maddox et al.	1	1	
EB		3,982,064	9/21/76	Barnaby	1	1	
EB		4,025,851	5/24/77	Haselwood et al.	1	1	
EB		4,262,329	4/14/81	Bright et al.	1	1	
EB		4,367,488	1/4/83	Leventer et al.	1	1	
EB		4,380,027	4/12/83	Leventer et al.	1	1	
EB		4,389,671	6/21/83	Posner et al.	1	1	
EB		4,639,779	1/27/87	Greenberg	1	1	
EB		4,647,974	3/3/87	Butler et al.	1	1	
EB		4,855,827	8/8/89	Best	1	1	
EB		4,874,936	10/17/89	Chandler et al.	1	1	
EB		4,885,632	12/5/89	Mabey et al.	1	1	
EB		4,920,503	4/24/90	Cook	1	1	
EB		4,977,594	12/90	Shear	1	1	
EB		5,075,773	12/24/91	Pullen	1	1	
EB		5,077,608	12/31/91	Dubner	1	1	
EB		5,077,795	12/31/91	Rourke et al.	1	1	

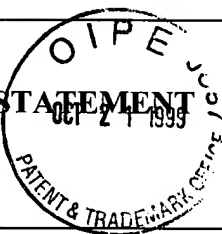
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	5,091,966	2/25/92	Bloomberg et al.			
	5,113,437	5/12/92	Best			
	5,128,525	7/7/92	Stearns et al.			
	5,144,660	9/1/92	Rose			
	5,168,146	12/1/92	Bloomberg			
	5,245,165	9/14/93	Zhang			
	5,247,364	9/21/93	Banker et al.			
	5,257,199	10/26/93	Funada et al.			
	5,319,735	6/7/94	Preuss et al.			
	5,327,237	7/5/94	Gerdes et al.			
	5,337,362	8/9/94	Gormish et al.			
	5,349,655	9/20/94	Mann			
	5,387,941	2/7/95	Montgomery et al.			
	5,396,559	3/7/95	McGrew			
	5,398,283	3/14/95	Virga			
	5,404,160	4/4/95	Schober et al.			
	5,418,853	5/23/95	Kanota et al.			
	5,425,100	6/13/95	Thomas et al.			
	5,428,606	6/27/95	Moskowitz			

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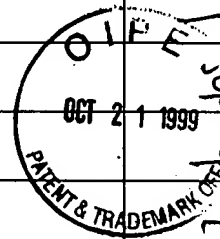
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**FOREIGN PATENT DOCUMENTS**

		Number	Date	Country	Class	Sub		
		5,432,542	7/11/95	Thibadeau et al.				
		5,450,122	9/12/95	Keener				
		5,461,426	10/24/95	Limberg et al.				
		5,481,294	1/2/96	Thomas et al.				
		5,488,664	1/30/96	Shamir				
		5,524,936	6/11/96	Kunt et al.				
		5,530,759	10/25/96	Braudaway et al.				
		5,532,920	7/2/96	Hartrick et al.				
		5,537,223	7/16/96	Curry				
		5,539,471	7/23/96	Myhrvold et al.				
		5,539,735	7/23/96	Moskowitz				
		5,541,662	7/30/96	Adams et al.				
		5,541,741	7/20/96	Suzuki				
		5,544,255	8/6/96	Smithies et al.				
		5,548,646	8/20/96	Aziz et al.				
		5,557,333	9/17/96	Jungo et al.				
		5,559,559	9/24/96	Jungo et al.				
		5,568,179	10/22/96	Diehl et al.				
		5,568,570	10/22/96	Rabbani				



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### FOREIGN PATENT DOCUMENTS

	Number	Date	Country	Class	Sub		
PH	5,572,010	11/5/96	Petrie				
PH	5,572,247	11/5/96	Montgomery				
PH	5,576,532	11/19/96	Hecht				
PH	5,579,124	11/26/96	Aijala et al.				
PH	5,582,103	12/10/96	Tanaka et al.				
PH	5,587,743	12/11/96	Montgomery				
PH	5,590,197	12/31/96	Chen et al.				
PH	5,602,920	2/11/97	Bestler et al.				
PH	5,606,609	2/25/97	Houser et al.				
PH	5,611,575	3/18/97	Petrie				
PH	5,613,012	3/18/97	Hoffman et al.				
PH	5,614,940	3/25/97	Cobbley et al.				
PH	5,617,148	4/1/97	Montgomery				
PH	5,629,770	5/13/97	Brassil				
PH	5,629,980	5/13/97	Stefik et al.				
PH	5,636,292	5/13/97	Rhoads				
PH	5,638,443	6/10/97	Stefik et al.				
PH	5,638,446	6/10/97	Rubin				
PH	5,646,997	7/8/97	Barton				

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	Number	Date	Country	Class	Sub		
CB	5,647,017	7/8/97	Smithies et al.	1	1		
CB	5,659,726	8/19/97	Sandford II et al.	1	1		
CB	5,659,732	8/19/97	Kirsch	1	1		
CB	5,661,574	8/26/97	Kawana	1	1		
CB	5,664,018	9/2/97	Leighton	1	1		
CB	5,666,487	9/9/97	Goodman et al.	1	1		
CB	5,721,788	2/24/98	Powell et al.	1	1		
CB							

**FOREIGN PATENT DOCUMENTS**

	Number	Date	Country	Class	Sub		
CB	551 016 A1	2/94	EPO	1	1		
CB	581 317	2/94	EPO	1	1		
CB	605 208 A2	7/94	EPO	1	1		
CB	649 074 A1	4/95	EPO	1	1		
CB	8-30759	2/96	Japan	1	1		
CB	2,204,984	11/88	U.K.	1	1		
CB	WO93/25038	12/93	PCT	1	1		
CB	WO96/26494	8/96	PCT	1	1		
CB	WO96/27259	9/96	PCT	1	1		

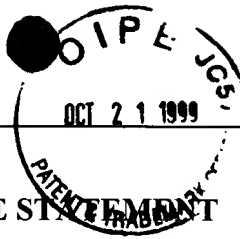
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**OTHER DOCUMENTS**

Burgett et al., "A Novel Method for Copyright Labeling Digitized Image Data," requested by e-mail from author (unavailable/password protected on IGD WWW site); received 9/18/95, 12 pages.

Burgett et al., "A Novel Method for Copyright Labeling Digitized Image Data," requested by e-mail from author (unavailable/password protected on IGD WWW site); received 9/18/95, 12 pages.

Caruso, "Digital Commerce, 2 plans for watermarks, which can bind proof of authorship to electronic works." New York Times, August 7, 1995, one page.

"Holographic signatures for digital images," The Seybold Report on Desktop Publishing, August 1995, one page.

Zhao et al., "Embedding Robust Labels Into Images for Copyright Protection," Proc. of the International Congress on Intellectual Property Rights for Specialized Information, Knowledge and New Technologies (Vienna, Austria) August 21-25, 1995, 10 pages.

"Frequently Asked Questions About Digimarc Signature Technology, August 1, 1995, [HTTP://WWW.DIGIMARC.COM](http://WWW.DIGIMARC.COM), 9 pages.

Bender et al, "Techniques for Data Hiding," Draft Preprint, Private Correspondence, dated 10/30/95

Johnson, "Steganography," December 10, 1995, 32 pages.

Aura, "Invisible Communication," Helsinki University of Technology, Digital Systems Laboratory, November 5, 1995, 13 pages.

Digimarc presentation at RSA Conference, approximately 1/17/96, 4 pages

Bartlett, et al., "An Overview of HighWater FBI Technology," Posted on Internet 3/22/96, 12 pages.

Brassil et al., "Hiding Information in Document Images," November, 1995, 7 pages.

Bors et al., "Embedding Parametric Digital Signatures in Images," EUSIPCO-96, Trieste, Italy, accepted for publication, September 1996 (Published on internet **April 9, 1996**, ([http://poseidon.csd.auth.gr/papers/confers.1\\_ind.html](http://poseidon.csd.auth.gr/papers/confers.1_ind.html))), 4 pages.

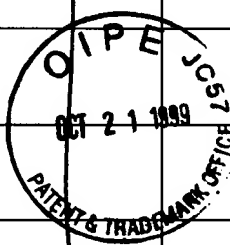
Nikolaidis et al., "Copyright Protection of Images Using Robust Digital Signatures," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP-96), accepted for publication, May 1996 (Published on internet **April 9, 1996**, ([http://poseidon.csd.auth.gr/papers/confers.1\\_ind.html](http://poseidon.csd.auth.gr/papers/confers.1_ind.html))), 4 pages. (Also published 1996 IEEE International Conference on Acoustics, Speech, and Signal Processing Conference Proceedings, May 7-10, 1996, vol. 4, pp. 2168-71.)

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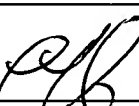
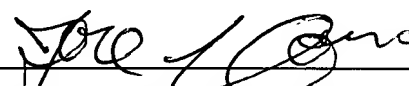
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<b>OTHER DOCUMENTS</b>			
		Pitas, "A Method for Signature Casting on Digital Images," 1996 IEEE International Conference on Image Processing (ICIP'96), Lausanne, Switzerland, accepted for publication, 16-19 September 1996 (Published on internet <b>April 9, 1996</b> , ( <a href="http://poseidon.csd.auth.gr/papers/confers.1_ind.html">http://poseidon.csd.auth.gr/papers/confers.1_ind.html</a> )), 4 pages.	
		Voyatzis, et al., "Chaotic Mixing of Digital Images and Applications to Watermarking, European Conference on Multimedia Applications, Services and Techniques (ECMAST'96), Louvain-la-Neuve, Belgium, accepted for publication, May 1996 (Published on internet <b>April 9, 1996</b> , ( <a href="http://poseidon.csd.auth.gr/papers/confers.1_ind.html">http://poseidon.csd.auth.gr/papers/confers.1_ind.html</a> )), 8 pages.	
		Koch et al., "Digital Copyright Labeling: Providing Evidence of Misuse and Tracking Unauthorized Distribution of Copyrighted Materials," OASIS Magazine, December 1995, 3 pages.	
		Boney et al., "Digital Watermarks for Audio Signals," Proceedings of MULTIMEDIA '96, 1996 IEEE, pp. 473-480.	
		Boucqueau et al., "Equitable Conditional Access and Copyright Protection for Image Based on Trusted Third Parties, Teleservices & Multimedia Communications, 2nd Int. Cost 237 Workshop, Second International COST 237 Workshop, November, 1995; published 1996, pp. 229-243.	
		Delaigle et al., "Digital Watermarking," Proc. SPIE - Int. Soc. Opt. Eng., vol. 2659, pp. 99-110, 1996.	
		Dautzenberg, "Watermarking Images," Department of Microelectronics and Electrical Engineering, Trinity College Dublin, 47 pages, October 1994.	
		van Schyndel et al., "Towards a Robust Digital Watermark," ACCV '95, vol. 2, December, 1995, pp. 504-508	
		Lesk, "Digital Libraries Meet Electronic Commerce: On-Screen Intellectual Property," Proceedings of the Third Forum on Research and Technology Advances in Digital Libraries - ADL - '96 - (Cat. No. 96TB100053), 1996, pp. 58-64.	
		Chudy, "Handcuff Digital Thieves," Byte Magazine, April, 1996, 4 pages.	
		New Product Information, "FBI at AppleExpo" (Olympia, London), November, 1995, 2 pages.	
		ORuanaidh et al., "Watermarking Digital Images for Copyright Protection," <a href="http://www.kalman.mee.tcd.ie/people/jjr/eva_pap.html">http://www.kalman.mee.tcd.ie/people/jjr/eva_pap.html</a> , February 2, 1996, 8 pages. (Also published August, 1996, IEE Proceedings-Vision, Image and Signal Processing, vol. 143, no. 4, pp. 250-6.)	
		DICE Digital Watermark System, Q&A, December, 1995, 12 pages.	
		Ohnishi et al., "Embedding a Seal into a Picture Under Orthogonal Wavelet Transform," Proceedings of MULTIMEDIA '96, 1996, IEEE, pp. 514-521.	
EXAMINER:	<i>Joe Z...</i>	DATE:	<i>10-31-99</i>

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<b>OTHER DOCUMENTS</b>			
		Arazi, et al., "Intuition, Perception, and Secure Communication," IEEE Transactions on Systems, Man, and Cybernetics, Vol. 19, No. 5, September/October 1989, pp. 1016-1020	
		Bruyndonckx et al., "Spatial Method for Copyright Labeling of Digital Images," 1994, 6 pages.	
		Craver et al., "Can Invisible Watermarks Resolve Rightful Ownerships?" IBM Technical Report RC 20509, July 25, 1996, pp 1-21. (also published Proc. SPIE - Int. Soc. Opt. Eng. Vol. 3022, pp. 310-21, conf. 2/13-14, 1997)	
		"Watermarking & Digital Signature: Protect Your Work!" Published on Internet 1996, <a href="http://ltswww.epfl.ch/jordan/watermarking.html">http://ltswww.epfl.ch/jordan/watermarking.html</a>	
		Gabor, et al., "Theory of Communication," J. Inst. Elect. Eng. 93, 1946, pp. 429-441.	
		Bruyndonckx et al., "Neural Network Post-Processing of Coded Images Using Perceptual Masking, 1994, 3 pages.	
		Pickholtz et al., "Theory of Spread-Spectrum Communications - A Tutorial," Transactions on Communications, Vol. COM-30, No. 5, May, 1982, pp. 855-884.	
		Sklar, "A Structured Overview of Digital Communications - a Tutorial Review - Part I," IEEE Communications Magazine, August, 1983, pp. 1-17.	
		Sklar, "A Structured Overview of Digital Communications - a Tutorial Review - Part II," IEEE Communications Magazine, October, 1983, pp. 6-21.	
		Tirkel et al., "A Two-Dimensional Digital Watermark," 1995, 6 pages. #192 appears more complete	
		Delaigle et al., "A Psychovisual Approach for Digital Picture Watermarking," 1995, 20 pages.	
		Fimmerstad, "The Virtual Art Museum," Ericsson Connexion, December, 1995, pp. 29-31.	
		Brandt et al., "Representations that Uniquely Characterize Images Modulo Translation, Rotation, and Scaling," Pattern Recognition Letters, August 1, 1996, pp. 1001-1015.	
		Mintzer et al., "Toward on-line, Worldwide Access to Vatican Library Materials," IBM J. Res. Develop. Vol. 40 No 2, March, 1996, pp. 139-162.	
EXAMINER: 		DATE: 10-31-99	
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		5,509,074	4/16/96	Choudhury et al.			
		5,526,427	6/11/96	Thomas et al.			
		5,530,751	6/25/96	Morris			
		5,680,223	10/21/97	Cooper et al.			
		5,687,191	11/11/97	Lee et al.			
		5,689,587	11/18/97	Bender et al.			
		5,719,937	2/17/98	Warren et al.			
		5,727,092	3/10/98	Sandford II, et al.			
		5,737,025	4/7/98	Dougherty et al.			
		5,765,152	6/9/98	Erickson			
		5,774,452	6/30/98	Wolosewicz			
		5,778,102	7/7/98	Sandford, II et al.			
		5,781,629	7/14/98	Haber et al.			
		5,784,461	7/21/98	Shaffer et al.			
		5,796,785	8/18/98	Spiero			

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	5,822,360	10/13/98	Lee et al.			
	5,825,892	10/20/98	Braudaway et al.			
	5,850,249	12/15/98	Masseti et al.			
	5,889,868	3/30/99	Moskowitz et al.			
	5,892,900	4/6/99	Ginter et al.			

**FOREIGN PATENT DOCUMENTS**

Number	Date	Country	Class	Sub	Filed

**OTHER DOCUMENTS**

		Proceedings, Technological Strategies for Protecting Intellectual Property in the Networked Multimedia Environment, Coalition for Networked Information, Interactive Multimedia Association, John F. Kennedy School of Government, Science, Technology & Public Policy Program, Massachusetts Institute of Technology, Program on Digital Open High-Resolution Systems, Volume 1, Issue 1, January 1994, 265 pages.

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